## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Michael Marks
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-38(B)** 

Please refer to p. 9 of the Company's Supplemental Volume I. The Company states that the forecast was based upon a sequential time series data set spanning from November 1993 through October 2001. In addition the Company filed its Forecast and Supply Plan with D.T.E on March 15, 2002. In this regard,

- (a) did the Company use information on the key variable during the four months span between the end of the time series and the time of filing? Please, discuss;
- (b) present on a separate table and for the period November, 2001 to February, 2002 the forecast and backcast of the number of customers and use per customers for each customer class;
- (c) did the Company use actual migration data for all customers classes for the period November, 2001 to February, 2002? Please, discuss;
- (d) provide a Table with data on reverse migration for the period November, 2001 to February, 2002.

#### **Response:**

- (a) No it did not.
- (b) See table attached.
- (c) No it did not.
- (d) Only one customer during the November, 2001 to February, 2002 period reverted back to default service. The customer was residential heating (R3) whose total capacity assignment was 7 dth.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: William Barschdorf
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-44** Please refer to p. 32 of the Company's filing. It states that Berkshire maintains weather data for degree-days ("DD's) and effective degree-days ("EDD's). In this regard,

- (a) define degree-days ("DD's) and effective degree-days ("EDD's). Please, emphasize the differences between those two temperature measures and how those differences applied to Berkshire service territory;
- (b) justify the use of degree-days ("DD's) in the development of the normal and the design planning standards instead of the effective degree-days ("EDD's);
- (c) the Company states that weather patterns experienced in Berkshire's service territory are the coldest and most severe in the state (see p. 41 of the Company's filing). Is there any relation between using ("DD's) instead of ("EDD's) and the Company's weather patterns?
- (d) show graphically, using line graphs, and also in a tabular form, the average monthly minimum, the average monthly maximum average degree-days ("DD's) and effective degree-days ("EDD's) for the Company's service territory and for the past 20 years.

#### **Response:**

Heating degree days are measured by taking the average of the daily maximum and minimum temperatures and subtracting from 65. Effective degree days take into consideration the wind chill effect on the maximum and minimum temperatures each day, typically resulting in slightly higher degree day totals. The Company, as stated on pages 31-32 of the filing, did not update its last weather study in the course of preparing its filing in this proceeding. Although historical effective degree day data is being accumulated, Berkshire continued to rely upon the planning recommendations approved in its last filing in developing this forecast. The Company will consider conducting a weather study in connection with its next forecast filing and, as appropriate, will rely on the recommendations of that study on whether to revise its planning standards so as to be stated in effective degree days.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: William Barschdorf
Date Filed: August 9, 2002

#### **Question:**

D.T.E. 1-45

Please refer to p. 32 of the Company's filing. The Company continues to rely upon the most recent study performed by Management Applications Consulting, Inc. ("MAC") to develop the Company's design planning standards. Please,

- (a) clarify when the MAC study was performed and the time span covered by the study;
- (b) discuss whether or not the most recent weather data (from 1998 to 2001) was used to updated MAC study on the design day, design year, design winter and cold snap planning standards:
- (c) if applicable, justify, using the most recent weather data (from 1998 to 2001), the use of the same aforementioned design standards for the current forecast and supply plan.

**Response:** 

The MAC study was performed in June 1991 and used the Company's historical degree day data dating back to 1951. The study was not updated for this filing. As stated on pages 31-32 of the filing, the Company took into consideration that it would be updating its econometric model and would be incurring substantial costs associated with the revision. The Company believes that the design standards recommended by the MAC study are still appropriate in its current planning process. Most importantly, Berkshire has experienced a design day within the past decade and a design winter within the past twenty five years. These events confirm the Company design standards are proper.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-46** 

Please explain the following statement: The Company believes that the continuing reliance upon these weather standards is <u>appropriate and cost-beneficial</u> for planning purposes (see p. 33 of the Company's filing). Please present evidence supporting that statement for the new forecast period 2001/02-2005/06.

## **Response:**

As stated on page 33 of the Company's filing, the Company considered many factors when analyzing whether to continue to rely upon its existing weather standards. While the cost of updating the study was considered, what was more appropriate was whether, once a study was updated, the Company would make changes to its portfolio. As described throughout the filing, the Company maintains an extremely flexible portfolio, particularly in the area of peaking resources. For instance, the Company's contract with Pittsfield Generating Company (see page 79 of the Company's filing) provides for peak supply at no cost to the ratepayer unless that resource is called upon. The same can be said of the Company's load management rate and even its propane facilities, as only very limited costs are associated with these largely depreciated facilities. Further, if any trend can be discerned from the more recent weather it is that the weather is getting warmer, not colder. The Company believes that it should still maintain the same level of peaking resources when you consider that, for many of those resources, there is no cost or minimal cost to the ratepayer to maintain those peak supplies and, as described in the response to Information Request D.T.E. 1-45, peak or near peak weather conditions have been experienced in recent years. Thus, because it was highly unlikely that any further refinement to the Company's peaking resources would be implemented during the forecast period, the Company did not believe that it was necessary to incur the added costs of a weather study at this time. For all these reasons, the Company continues to believe that continuing to rely on the previous weather study is appropriate and cost-beneficial for planning purposes.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

**Question:** 

D.T.E. 1-59 Please discuss in detail how and to what extent Berkshire's acquisition by Energy East

Company has improved the Company's integrated resource planning (IRP) process and the

provision of reliable and least-cost service to its customers.

**Response:** 

The Company's acquisition by Energy East Company will facilitate the continuing improvement of the Company's integrated resource planning process in many ways. First, on an operational manner, the Company may formally and informally draw upon the knowledge and experience of a wider range of experts at its affiliated companies. The Company regularly meets with other forecasting and planning experts. These meetings also enable the sharing of information on market developments, regulatory changes, forecasting techniques, available data and experiences with consultants. Second, the merger has facilitated an increasing integration of certain planning activities where beneficial. The most noticeable example is the Company's participation in the BP Energy Alliance. BP would not have been interested in providing portfolio optimization service to Berkshire on a standalone basis. In fact, several respondents to the Company's recent bid solicitation process for portfolio optimization service declined to respond because they could not find enough value in the Company's portfolio. By participating in this Alliance, Berkshire is providing service to its customers on more than a least cost basis. That is, if no optimization occurred, the Company's existing contracts do provide a least-cost resource to customers. Optimization provides additional savings above those least-cost resources. Further, the Alliance is structured such that the greater the optimization, the greater the savings that is provided to all of the Energy East LDCs. Thus, when customers need greater optimization, during times of volatility and high prices, Berkshire can provide that benefit. However, if the Company was not affiliated with Energy East, those type of savings could not be generated on a stand-alone basis. See also the response to DTE 1-61.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-62** 

Please refer to page 48 of the Company's filing. Please provide the basis for the Company's assertion that Berkshire's "ability to be "in the market" on a daily basis through its alliance with BP Energy and the other East Energy companies has enabled it to maximize its optimization opportunities." In your response, please provide figures showing the optimization savings realized by the Berkshire each year as a stand-alone company during the past ten years. How do these savings compare with the savings realized by the Company as part of the East Energy alliance?

#### **Response:**

In previous optimization deals in which Berkshire participated, the Company was not "in the market on a daily basis." That is, someone managed the Company's portfolio on its behalf. As part of the BP Energy Alliance, the Company makes daily decisions as to how its portfolio should be utilized due to its daily participation with the other Alliance participants. As soon as an opportunity arises, the Company, along with the other Energy East LDCs, can participate due to this constant involvement.

The market has changed dramatically since the Company first participated in optimization opportunities. It is important to review this history and understand how the market has evolved since FERC Order 636 was established in September 1993. Berkshire has been very active in managing its portfolio and ensuring least cost gas and reliable service for its firm customers, especially since the final implementation of FERC Order 636 in November 1993. Under Order 636, gas distribution companies became solely responsible for securing and managing their own gas supplies and supply assets. In adapting to this change, Berkshire played an instrumental role in forming a purchasing coalition comprised of seven New England gas distribution companies. The Mansfield Consortium, as it was named, used the member companies' combined purchasing power to enhance their ability to negotiate aggressively-priced supply contracts with very favorable terms and conditions matching those that would only be available to larger purchasers in the marketplace. In doing so, the companies, including Berkshire, were able to provide their customers with reliable gas supplies at competitive prices.

In addition to the advent of the Mansfield Consortium, Berkshire also looked at the requirements of deregulation under Order 636, and a subsequent Department Order in D.P.U. 93-141, and assessed its ability to market gas supplies through off-system sales and

## THE BERKSHIRE GAS COMPANY DTE 02-17

release excess capacity when not being used by its firm customers in order to maximize the use of its assets. While Berkshire did not have the administrative resources to market off-system sales and release excess capacity, it did utilize the services of Pendulum Gas Resources. From 1993 through 1999, Berkshire was able to return substantial amounts to its firm ratepayers due to this relationship while still ensuring least cost gas and reliable service.

Upon the Department's Order in 98-32-B which unbundled the natural gas market on the state level resulting in a statewide customer choice program beginning November 1999, the Department accepted the concept of a "Portfolio Auction" so that all Massachusetts gas customers would have the ability to receive reliable, safe and least-cost service even if they were not able to purchase their gas from a third party marketer. Shortly thereafter, Berkshire went through a robust, competitive solicitation for an asset manager. After much review, Berkshire selected Energy USA-TPC Corporation ("TPC") to manage its assets for the period November 1999 through October 2000. This relationship was extended through March 2001 until the Company's agreement with the BP Energy East Alliance became effective.

The Department's order in DPU 93-141-A, established four categories of optimization activities. These categories have been tracked since May 1995. The following summarizes the annual May through April earnings since that date by category. It should be noted that the margins earned are returned to the ratepayers unless the Company exceeds the margins earned from the prior year. In that case, the Company retains 25% of the excess above the prior year. Interruptible sales and interruptible transportation opportunities were entered into by the Company and continue to be entered into on its own while capacity release and off-system sales opportunities were entered into with the help of a third party. Capacity release and off-system sales for the years 1996 through 2001 may be compared with 2002 to determine how the Company optimized its portfolio on a stand-alone basis compared with the Energy East alliance. However, such comparison must be tempered by the consideration of changing market conditions and opportunities. One significant trend has been the ongoing and substantial reduction in the value of the Company's assets for optimization purposes. The responses to RFP's issued by the Company have reflected this trend. Perhaps a more meaningful comparison is to benchmark levels of savings that might be expected under normal conditions. The alliance compared favorably to such analyses.

# THE BERKSHIRE GAS COMPANY DTE 02-17

# May through April (\$000)

	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>
Interruptible Transportation	\$241	\$179	\$152	\$190	\$203	\$134	\$217
Interruptible Sales	612	538	245	216	368	62	249
Capacity Release*	394	200	0	51	457	625	0 (a)
Off-System Sales		612	160	119	129	0	0
314 (a)							

<sup>\*</sup>Asset management in effect November 1999 to March 2001. All asset management payments were assumed to be capacity release margins.

<sup>(</sup>a) To be categorized upon completion of follow-up audit report on alliance procedures and controls.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

**Question:** 

**D.T.E. 1-63** Please refer to page 48 of the Company's filing. Please explain how the "Company has

actively monitored the operation of the alliance structure." Please provide documentation to

support your answer.

**Response:** 

The Company has actively monitored the operation of the alliance structure through its daily participation in alliance activities as well as the monthly review of gas cost invoices and optimization savings. Alliance reporting processes were refined throughout the initial term and is reflected in revised agreements before the Department for review in docket D.T.E. 02-19. These procedures enabled the Company to identify and respond to any questions or concerns regarding the alliance. The Company also initiated a comprehensive audit of alliance procedures and controls. The audit report is provided herewith. The report has been treated as confidential in docket D.T.E. 02-19. The Company respectfully requests that this material be similarly accorded confidentially treatment and is providing copies of the report only to the Hearing Officer and to the Attorney General and Division of Energy Resources pursuant to executed confidentiality agreements.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-64** 

Please refer to page 48 of the Company's filing. The Company notes that "Berkshire was directed to issue a new RFP and to demonstrate to the Department that renewing the Optimization and Purchase Agreement with BP Energy would likely produce benefits to Berkshire that would equal or exceed other market offerings." Please provide a detailed analysis supporting the Company's decision concerning the Optimization and Purchase Agreement with BP Energy.

#### **Response:**

Attached are the bids provided to Berkshire on a stand-alone basis. The bids provided reflected the reduced market conditions that were in effect during the winter 2001/2002 period. The Company could not justify accepting proposals that were significantly less than the optimization dollars that had been achieved previously. Further, if the Company were to have accepted any of these proposals, there would be no upside potential to the Company or its ratepayers if the market conditions were reversed in the winter 2002/2003 period. Thus, Berkshire determined it was more appropriate to participate in a coordinated competitive bidding and negotiation process with the other Energy East companies. Please see the attached spreadsheet which summarizes Berkshire's potential optimization savings on a low range, mid range, and high range case for savings. In comparing these savings to the bids provided to Berkshire on a stand-alone basis, it is clear that they were provided at the low range with no potential upside to customers. Thus, based on this analysis, the Company determined it should participate in the joint bidding process with the other Energy East companies and, ultimately, accept the bid from BP Energy which provided the most upside potential.

Please note that these bids are considered highly confidential. These materials have been provided in docket D.T.E. 02-19 subject to protected treatment. The Company respectfully request similar treatment for all the reasons stated in that docket. Accordingly, the Company is providing a copy only to the Hearing Officer and to the Attorney General and the Division of Energy Resources pursuant to executed confidentiality agreements.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-66** 

Please refer to pages 49 through 52 of the Company's filing. Please explain which pipelines and regional supply project changes "will have a direct impact on Berkshire's customers" and how the Company plans to take advantage of these changes in the next five years.

## **Response:**

Many of the projects listed on pages 49 through 52 of the Company's filings will have an indirect, and in some cases, direct impact on the Company's customers. This is due to several factors. First, all stakeholders in the region benefit in terms of cost and reliability when new resources or greater competition are added to the region. The Company expects to secure direct benefits in, for example, gas supply solicitations. A second area of benefit relates to the Company's participation in the BP Energy East Alliance. For instance, the Company is already benefiting from lower delivery prices out of Dracut and will have a further benefit from as the facility expands. While Berkshire will not have a direct benefit from the projects that utilize Algonquin or Iroquois, there will be an indirect benefit as a member of the Energy East alliance. For instance, if another alliance company uses more Algonquin, Iroquois, or other pipeline gas, that would free up more Tennessee pipeline gas which could benefit Berkshire's customers. Overall, any additional sources of gas into New England is a potential benefit to customers which should result in lower overall prices and greater reliability.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink/William Barschdorf

Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-84** Please refer to pages 74 through 76 of the Company's filing.

- (1) Please discuss the decision-making process that the Company engages in when purchasing gas for storage during the off-peak season.
- (2) Include in the discussion a list of all factors that the Company considers when determining the appropriate amount and price at which gas is procured for injection as well as the factors which determine the timing of injection and withdrawal of gas from storage.
- (3) Please show graphically, and on a monthly basis, the amount of gas that the Company injected or withdrew from storage for each of the past five years.
- (4) Please show graphically, and on a monthly basis, the amount of gas that the Company withdrew from storage for each of the past five years expressed as a percentage of the Company's total sendout for each month.
- (5) Also, please discuss whether or not futures and options may be helpful tools in procuring gas for storage.

#### **Response:**

(1 and 2)

Underground storage capacity is an essential tool in the Company's cost minimization strategy. Storage allows the Company to utilize its long-haul pipeline capacity between the production fields and the storage fields at a high load factor. Storage also allows the Company to serve peak period requirements with lower cost, off-peak gas, and to manage minimum take requirements. Storage is also a valuable means of managing short-term fluctuations in demand. When purchasing gas for storage during the off-peak season, the Company will consider many factors, including the cost of gas at the time, the projected cost of gas during the off-peak season, and weather patterns. The Company will accelerate or defer injections depending on the cost of gas at the time while managing its injection targets to comply with pipeline requirements. The overall goal is to inject gas into storage when the price is at the least cost while maintaining injection target levels.

Since November 1, 1999, Berkshire has purchased its gas supply for injection into its storage fields in a ratable fashion. Under an asset management agreement with Energy USA/TPC, Berkshire paid for gas injected into storage based on an index price for 1/7<sup>th</sup> of its total storage requirement for the months of April 2000 through October 2000. As part of its current contract with BP Energy, the Company pays 1/12<sup>th</sup> for the months of April

## THE BERKSHIRE GAS COMPANY DTE 02-17

and October and 1/6<sup>th</sup> for the months of May through September. This pricing is also index based. It is important to note that the payment is based on "paper injections". That is, the amount of physical gas that is injected into storage is at the discretion of BP Energy, and formerly Energy USA/TPC. The storage capacity that the Company holds with Dominion and Tennessee Gas Pipeline are assets that are optimized by BP Energy as part of the Alliance agreement between the Company and the other Energy East LDC's. BP Energy will physically inject gas into storage on behalf of the Company at its option. Berkshire is not liable for any changing market conditions that may be present at the time of the physical injection.

(3 and 4)

See graphs attached.

(5) Pleaser refer to the response to parts in (1) and (2).

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-86** 

Please explain what steps the Company has taken to protect customers in the future, from the kind of high gas price volatility that occurred in the winter of 2000-2001. Please provide an analysis showing the Company's expectation of gas commodity prices in the next five years, including a discussion of the factors that are likely to influence those prices.

#### **Response:**

Berkshire notes that it has been very active and creative in managing its resource portfolio to ensure least cost gas and reliable service for its customers, which should result in protecting customers from the kind of high gas price volatility that occurred in the winter of 2000-2001. It is important to recognize the steps taken to date to address these concerns. Berkshire has utilized a range of opportunities in its resource management including restructuring contracts to be both flexible in its pricing provisions as well as the amount of gas purchased or delivered and the length of the contracts. By developing an efficient but flexible portfolio, the Company can provide least cost gas and reliable service for its customers. The Company has also worked with third party providers (see below) to help the Company gain more value in its portfolio by releasing capacity or making off-system sales when not needed by the Company's customers. This has resulted in additional savings to customers.

As noted in the response to Information Request D.T.E. 1-62, pursuant to Order 636, local distribution companies such as Berkshire were required to secure and manage their own gas supplies and supply assets. In response, Berkshire implemented several initiatives in order to manage its own gas supplies. Berkshire, along with six other New England gas utilities, formed the Mansfield Consortium. This collaboration enabled these smaller companies to "pool" their resources in order to achieve aggressively order to secure more favorably priced supply contracts with favorable terms and conditions. The Mansfield Consortium afforded Berkshire greater market power and enabled Berkshire to secure more favorable prices while maintaining security of supply, thus mitigating risk. Regarding the management of supply assets, Berkshire also utilized the services of retained Pendulum Gas Resources to market off-system sales and release excess capacity on the Company's behalf. This arrangement was in place from 1993 through 1999. Berkshire secured substantial margins for the benefit of customers through this relationship while maintaining reliability.

Berkshire's resource management activities continued to recognize new opportunities that

## THE BERKSHIRE GAS COMPANY DTE 02-17

resulted from changing market or regulatory conditions. For instance, the Company had experienced migration from sales to transportation service which gave the Company an opportunity to adjust its resource portfolio. First, the Company went through extensive negotiations with Tennessee Gas Pipeline in the renewal of its capacity contracts. The revised contracts resulted in significant savings to customers in demand charges as well as the flexibility to reduce the amount of the maximum daily upstream capacity if market or regulatory conditions changed. Second, Berkshire was able to terminate a storage contract that was no longer required due to the migration on the Company's system. This also resulted in significant savings to customers. Finally, the Company terminated a long-term gas supply contract that included demand charges and replaced it with a short-term gas supply contract with minimal demand charges.

In addition to the contract revisions, the Company considered other ways in which it might further optimize its resource portfolio. Shortly after the Department's Order in 98-32-B, which unbundled the gas market for all customers on a state level, the Company went through a robust, competitive solicitation for an asset manager. The Company's solicitation sought to address Department mandates, but also exploit newly available opportunities for the benefit of customers. After substantial review and negotiation, the Company executed a contract with Energy USA-TPC Corporation ("TPC") to manage its assets for the period November 1999 through October 2000. The agreement was reviewed and approved by the Department in Berkshire Gas Company, D.T.E. 99-81 (1999). During the term of the agreement, the Company's parent was acquired by the Energy East Corporation. Berkshire recognized that substantial new opportunities might be available for the benefit of customers as a result of the merger and considered opportunities to secure such customer benefits at the earliest date. That arrangement was extended Accordingly, Berkshire extended the TPC agreement through March 31, 2001 so that the Company could consider another opportunities to combine its assets with other Energy East companies to gain more value for its customers.

In late 2000 and early 2001, Berkshire pursued an aggressive benchmarking effort to determine the opportunities that could be secured for customers through the combined efforts with other Energy East local distribution companies. Berkshire and these entities ultimately issued a request for proposals for a range of potential services, either on a combined or individual basis. As a result, the Company Effective April 1, 2001 to the present, the Company has been involved in an alliance arrangement with the other Energy East companies and BP Energy Company that was approved by the Department in Berkshire Gas Company, D.T.E. 01-41 (2001). This alliance established a cooperative initiative among BP Energy and the LDCs with the objective of lowering gas costs while

## THE BERKSHIRE GAS COMPANY DTE 02-17

maintaining reliability of service. It is important to note that 100% of the optimization savings have been returned to firm sales customers, absent any threshold savings generated pursuant to D.P.U. 93-141-A. Additionally, the agreement with BP Energy Company includes a requirement for BP to provide a portion of the Company's daily gas supply needs. This requirement includes flexible pricing terms including the ability to establish a trigger price for the cost of the gas supply rather than relying upon the first of the month price index. While the Company has not exercised the trigger price option, it is a benefit that may reduce risk and provide more price stability for customers. Finally, the optimization arrangement with BP Energy provides the upside potential to the LDCs, thus insuring customers will achieve more optimization at a time when it is most necessary – during a period of high and volatile prices, such as occurred in the winter of 2000-2001. This important feature was enhanced in the new alliance agreements pending before the Department in D.T.E. 02-19.

In addition to managing its upstream resources as described above, the Company has been successful in the management of its downstream resources. For instance, the Company's aggressive and creative efforts, including the use of load management and conservation resources, deferred substantially the need for the Company's state-of-the-art LNG facility and, thus, resulted in cost savings to customers. Further, the development of the LNG plant resulted in substantial cost savings over more traditional resource alternatives. Finally, the Company's relationship with a local cogeneration facility provides peaking resources to customers at no cost unless the resources are used.

This brief summary demonstrates the aggressive, creative and continuing efforts of the Company to optimize its resource portfolio. Berkshire has sought to secure benefits and reduce price risk through a variety of initiatives, both long- and short-term. Berkshire believes that these efforts have helped the Company to address both price and volatility risk for the benefit of customers and led to several general conclusions. Customer price and volatility benefits are secured best when the Company is flexible and responsive to changing conditions and new opportunities. solicitation should reflect then current opportunities and conditions.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-87** 

- (a) Please explain whether the Company used any risk management tools, financial or physical, in the past five years to mitigate gas price volatility? If the answer is in the affirmative, how successful were they?
- (b) If the answer to (a) is negative, please explain why, highlighting any problems and/or difficulties in the use of risk management tools.
- (c) Does the Company plan to use any risk management tools in the next five years to reduce gas price volatility? If the answer is in the affirmative, please explain the Company's choice of risk management tools. If the answer is negative, please explain why.

#### **Response:**

- (a) See the response to DTE 1-86 for a discussion of the Company's participation with an asset manager and an alliance arrangement which has helped to mitigate gas price volatility. The Company has not entered in the risk management transaction directly, rather, the third party managing or helping to manage the portfolio enters into the transaction on the Company's behalf. The results have been successful as noted by the level of optimization achieved in the response to DTE 1-62.
- (b) Not applicable.
- (c) Berkshire believes that LDC's should have clear direction as to the nature of permissible risk-management transactions. Berkshire has been able to rely upon the clear directives of the Department in this regard. See, D.T.E. 01-41. Berkshire believes that the Department should continue to allow the LDCs to choose whatever risk-management instruments will result in least cost, reliable service for its customers, as long as the LDC does not engage in any speculative financial arrangements. Alternatively, if an LDC wishes to pursue more speculative strategies, the LDC should be able to secure relevant regulatory approvals and, in turn, be able to rely upon the terms and conditions of such approvals.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-89** Please refer to pages 10, 11 and 13 of the Company's filing.

- (1) Please provide figures showing the load reductions resulting from the implementation of the Company's DSM and other conservation programs in the past five years by customer class.
- (2) How much of the forecasted increases in demand in the next five years can be met with demand-side management programs.
- (3) Please compare the costs and environmental impacts of demand-side management, relative to meeting demand with increased levels of other resources.

#### **Response:**

1) The following are savings data resulting from the Company's DSM/Energy Efficiency programs as reported in each of the Company's Annual Update on the status of Demand Side Management Activities.

Program Period	Residential Savings	Commercial and Industrial Savings	Total Savings (MCF)
	(MCF)	(MCF)	
1997-1998	14,354	41,160	55,514
1999-2000	28,907	22,167	51,074
2001-2002*	14,683	20,601	35,284
TOTAL	57,944	83,928	141,872

<sup>\*</sup>January 1, 2001 through April 30, 2002

- 2) The Company has projected approximately 63,868 MCF of savings attributed to its DSM/Energy Efficiency efforts over the next five years.
- 3) During the same time period, i.e. January 1997 through April 30, 2002, the Company spent a total of \$3,121,709 on its DSM / Energy Efficiency programs. The Company's total avoided costs for the same time period were \$6,569,305 resulting in a benefit cost ratio (BCR) of 2.10. The Company's avoided cost calculations do not include environmental externalities.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-92** 

Please refer to page 30 of the Company's filing. Please outline any awareness programs which the Company has instituted to educate its current and potential customers on the implementation of gas unbundling and customer choice in Massachusetts. In your response, please highlight, in particular, the steps that the Company has taken to educate customers on issues relating to the Company's ability to serve capacity-exempt transportation customers who request to switch back to the Company's default sales service.

#### **Response:**

The Company has undertaken substantial efforts to educate current and potential customers on the implementation of gas unbundling and customer choice in Massachusetts to date. The Company has long supported the efforts to unbundle the market. The Company's efforts have included a wide range of particular measures. For example, the Company has included a number of inserts to its customers over the years to inform them of the current developments with natural gas unbundling in Massachusetts and the customers options. The Company conducted several well-attended meetings with its commercial and industrial customers to describe the customers' new options and to encourage each customer to secure the least cost gas supply. Many steps are taken on a daily basis by service representatives, primarily in terms of responding to customer inquiries. In addition, the Company has been active in terms of implementing procedural steps to make the process run smoothly and avoid customer frustration. The Company was the first New England utility to supplement electronic data interface so that more accurate information can be provided and billing errors avoided. The steps the Company has taken to educate customers on issues relating to the Company's ability to serve capacity-exempt transportation customers who request to switch back to the Company's default sales service have been direct one on one contact with those customers. When notified, the Company's Key Account Representative, Transportation Manager or Rates and Planning Administrator call or meet with the customer to go over the customer's options. The customer is informed that by staying capacity exempt, they may be able to negotiate a lower price from the supplier than if they had capacity. The customer is encouraged to stay capacity-exempt by renewing the supply contract with their current supplier or negotiate a contract with a new supplier from the list of active suppliers working in Berkshire's service territory that the Company provides.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness:	
Date Filed	l:

#### **Question:**

**D.T.E. 1-102** Please refer to pages 80 through 82 of the Company's filing. Please describe how each of the peaking propane plants fits into the Company's non-regulated propane business.

#### **Response:**

The Company does not maintain any non-regulated propane operations. These operations are conducted by an affiliate. The Company's customers benefit by the allocation of operating costs of certain shared storage facilities. These storage tanks are necessary in order to provide reliable service. Berkshire's customers have first priority on the tanks yet are only responsible for approximately 5% of the costs of the tanks.

## THE BERKSHIRE GAS COMPANY **DTE 02-17**

Witness: Karen Zink **Date Filed:** August 9, 2002

#### **Question:**

**D.T.E. 1-108** Please refer to page 67 of the Company's filing. Please explain how the construction of the LNG storage and vaporization facility in Whately has contributed to the Company's goal of "Least Cost Supply Strategy."

#### **Response:**

Construction of the LNG facility was one of several alternatives that the Company considered when addressing the reliability concern it had in the Eastern Division of its service territory. It was ultimately decided that building an LNG facility in Whately would provide the best benefit to Berkshire's customers without the exposure to the significant costs of laying additional pipe in the ground or relying on the propane peak shaving plants in Hatfield and Greenfield. The LNG facility has given the Company a high degree of reliability that it did not have in the eastern portion of its distribution system. While Berkshire's customers are paying for costs associated with building the Whately LNG facility, those costs are considerably less than the more costly alternative of putting additional pipe in the ground.

Please refer to Attachment DTE 1-108 that includes several sections of the text from the "Operational, Environmental & Economic Plan and Analysis of Alternative Sites for a Proposed LNG Peaking Facility" dated January 1999 ("Plan and Analysis") that accompanied the Company's petitions to the Department and the Energy Facilities Siting Board with respect to the construction and operation of the Whately LNG plant. The following sections of the text of the Plan and Analysis are provided: Section 1 – Executive Summary; Section 2 – Overview of the Greenfield Distribution System; Section 3 – Need for the Proposed Facilities; and Section 4 – Analysis of Project Alternatives. Section 4 includes the results of a 20-year planning period NPV analysis. This analysis did not include any inflation adjustment and, therefore, understated the cost benefits of the LNG proposal. The Company's analysis determined that the LNG facility alternative had NPV costs of approximately 60% of a project alternative that did not provide a sound engineering solution and approximately 44% of the NPV cost of the only practical project alternative. Revised cost analyses presented in the case that included an inflation factor are cited in the Department/Energy Facilities Siting Board decision and demonstrated that the LNG facility alternative had an NPV cost of 36% of the practical project alternative. See EFSB 99-2/DTE 99-17, pp. 28-30.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: William Barschdorf
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-114** (a) Please develop a line graph that analyzes Berkshire's percentage level of utilization of contracted LNG for each year since 1992. (The Y axis should indicate variance

percentage from LNG contract volume to actual LNG use on a monthly basis).

- (b) Please provide the data points (in volumetric and percentage terms) used to generate this line graph.
- (c) Please provide a discussion for those instances when LNG utilization was less than 60%.

#### **Response:**

Berkshire is not able to supply a line graph because its historical records do not go back to 1992. However, any such graph would reflect the fact that the Company believes it has continually taken the full contractual volumes under its LNG agreement with Distrigas, with the exception of only this past winter. This was due to the fact that the price of this supply this past year, which is adjusted annually, was consistently higher than gas available on the market. To ensure a least cost dispatch, Berkshire relied on other supply alternatives through the BP Energy / Energy East alliance to serve its customers with a lower cost supply. The Company did utilize its Distrigas contract by nominating LNG liquid to fill and maintain proper storage levels at its Whatley LNG facility. A table providing historical LNG sendout is provided for information purposes.

## THE BERKSHIRE GAS COMPANY **DTE 02-17**

Witness: William Barschdorf **Date Filed:** August 9, 2002

#### **Question:**

**D.T.E. 1-116** Please refer to pages 79 and 80 of the Company's filing. Please explain and quantify on an annual basis how the Pittsfield Generating plant provides benefits to the Company and its customers. Please provide a copy of the contract that the Company has with Pittsfield Generation covering the arrangement for peaking supplies.

**Response:** 

The primary benefit to the Company's customers is the absence of demand charges associated with the agreement. There are several components to the contract structure. First, the Company is entitled to firm transportation to the Company's Pittsfield load center. This feature provides reliability and avoids the need to incur costs associated with an expansion of the Tennessee North Adams lateral. The Company also maintains a variety of gas purchase rights, including during peak periods. This critical peaking resource provides a high level of reliability for Berkshire during peak conditions and in the event of a supply disruption. The Company only pays for the commodity cost of the gas it receives. The price to Berkshire is calculated on a formula based on Pittsfield Generating's cost of natural gas it receives at the facility and the cost of their alternative fuel. Finally, the Company has engaged in joint balancing resulting in substantial savings in imbalance charges. It is difficult to quantify the benefits secured from this arrangements. The Company estimates that benefits for customers over the term of these agreements have exceeded several million dollars, all secured at no cost to customers. The relevant agreements with Pittsfield Generating (formerly "Altresco") are attached.

## THE BERKSHIRE GAS COMPANY **DTE 02-17**

Witness: Karen Zink **Date Filed:** August 9, 2002

#### **Question:**

**D.T.E. 1-117** Please refer to pages 79 and 80 of the Company's filing. Please do a cost-benefit analysis of the Pittsfield Generation arrangement compared to other alternative peaking and storage options. In your analysis, please discuss also the importance of non-price factors such as flexibility, diversity, and reliability in the Company's decision in relation to the Pittsfield Generation resource and other alternatives.

**Response:** 

Please refer to the response to Information Request D.T.E. 1-116. A precise analysis of the benefits is more difficult and not particularly informative as the Company incurs no costs associated with this resource (unless it elects to purchase some of the plant's gas supply). The Company has secured millions of dollars of benefits over the term of the agreements and avoided the need to incur other costs. The contract provides diversity, reliability, flexibility and cost benefits. It is important to note, however, that the contract with Pittsfield Generating has no cost unless the service is called upon, making this one of the least cost peaking resources available to customers. Accordingly, the Company expects to retain this extremely beneficial service. The Company is proud to have applied innovative and creative planning so as to secure such a substantial benefit for customers.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-121** Please refer to page 82 of the Company's filing.

- (A) Please discuss in detail the measures that the Company has in place to reduce load in the case of an emergency.
- (B) Please indicate if the Company has ever had to implement this procedure. If yes, please provide all information as to when and under what circumstances.
- (C) Please discuss also how successful the Company's load management program has been to date.
- (D) Please discuss how the Company intends to improve upon its load management program in the next five years.

#### **Response:**

Gas Dispatch Operations is in the process of developing an Emergency Load Shedding Plan. A list of customers on the system that use at least 600 ccf per any one month has been compiled. From the original list the following has been developed:

- (a) Breakdown by Gate Station, location of the meter set, assignment to critical valves in the territory, 24/7/365 contact with existing customers for access at any time.
- (b) Program includes 3 years of monthly usage at the meter and is then broken down for seasonal and daily usage at the critical valves by Gate Station.

To date, the company has not had the need to implement this procedure.

(c) The Company's largest customer has participated in the Load Management Program since its inception in 1993. The Load Management Program allowed the Company to defer construction of its Whately LNG Vaporization facility until 1999. Until this time, the Load Management Program was the Company's sole means of maintaining adequate distribution system pressure in its Greenfield Division during peak or near peak periods or when delivery pressures from the Tennessee Gas Pipeline Company system dropped.

# THE BERKSHIRE GAS COMPANY DTE 02-17

(d) The Company will continue to offer the Load Management Program throughout the forecast period. The Company will make this service available to eligible customers but does not anticipate customer additions during the forecast period.

# THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: William Barschdorf
Date Filed: August 9, 2002

**Question:** 

**D.T.E. 1-123** Please discuss any major problems that the Company has had in serving customers in the

past five years during peak and off-peak periods and how the Company resolved those

problems.

**Response:** The Company has not had any major problems where the Company was not able to

provide service to customers during peak or non-peak periods in the past five years.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: William Barschdorf
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-126** Please indicate whether the Company made any spot gas purchases in the past five years. With regard to the Company's purchase of spot gas, please discuss:

- (a) the volume of spot gas purchases the Company has made over the past five years.
- (b) the point of purchase of spot gas (i.e the wellhead or the city gate)
- (c) the advantages and disadvantages of purchasing spot gas at both the wellhead and at the city-gate.
- (d) the Company's inherent ability to maintain low cost gas at the targeted standards of reliability given that approximately two-thirds of its long-haul supply is spot gas.
- (e) the effects of a significant rise in spot prices (10% increase, 25% increase, 50% increase) on the Company's CGAC.
- (f) please provide a chart reflecting the commodity price paid by Berkshire Gas for each commodity contract.
- (g) how the Company determines the quantities of gas to be purchased on the spot market and how it selects spot gas vendors.

#### **Response:** (a) Please see the attached table.

- (b) Please see the attached table.
- (c) The advantages and disadvantages of purchasing gas at the wellhead or city-gate is dependent upon the market conditions at the time of the purchase as well as the source of the gas. For example, if the Company were able to buy gas at Dracut and bring that gas to its city-gate at a lower price than gas from the production area transported on Berkshire's long-haul contract, the transaction would contribute to the Company's goal of least cost dispatch. Conversely, during periods of highly volatile market area prices, Berkshire would rely on purchasing gas in the production area and transporting the gas to its city-gates on its long-haul contract.
- (d) The Company's ability to maintain low cost gas is due to the flexibility of its firm gas supply and transportation contracts. Berkshire, as shown in the attached table, has not purchased a high volume of spot gas in recent years. This is mainly due to its asset management arrangement beginning November 1999 and its alliance partnership starting in April 2000. Prior to these agreements the Company did

## THE BERKSHIRE GAS COMPANY DTE 02-17

meet a significant portion of its supply requirement with spot gas, mainly to fill storage.

- (e) A rise in spot gas prices would have an effect upon the Company's CGAC. The impacts would be less than the price increase due to the fact that demand charges would not change and because of the pricing provisions within approved supply contracts.
- (f) Please see the attached table.
- (g) Berkshire's gas supply planning process determines the volume of gas required for that month as well as an average daily requirement, including storage injections. This process is based on the Company's forecasted sendout under normal weather conditions for a particular month. If Berkshire's service territory experiences colder than normal weather during a month, the Company's sendout will increase, as will its supply requirement. As a member of the BP Energy / Energy East Alliance the Company has the capability of purchasing additional spot gas with various pricing options through the alliance. Berkshire also had similar options with Energy USA/TPC under its asset management arrangement. Prior to November 1999, the Company would acquire spot supply from various suppliers who kept in contact with Company personnel on a regular basis. Pricing was the major consideration in determining which supplier Berkshire contracted with since the Company only dealt with Companies that provided reliable service.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

**D.T.E. 1-127** Please discuss, in relation to the design of the Company's supply portfolio:

- (1) the advantages and disadvantages of short-term contracts versus long-term contracts for gas supplies, transportation, and storage to the Company and its customers.
- (2) the advantages and disadvantages of short-term contracts versus spot market purchases of gas supplies to the Company and its customers.
- (3) the advantages and disadvantages of long-term contracts versus spot market purchases of gas supplies to the Company and its customers.
- (4) the tools and mechanisms that the Company employs to monitor and assess the market for supplies, transportation, and storage.
- (5) how effective have the tools and mechanisms that the Company uses to monitor the market been in the past five years?

## **Response:**

- (1) The decision whether to enter into a short-term or long-term contract for gas supplies, transportation, and storage will depend on many factors including current price versus future price projections, availability, supply/demand, and reliability to name a few. Further, during changing market conditions, such as is currently the case while migration is occurring, it is important to maintain flexibility in any contract decisions, especially if it is a long-term contract.
- (2) The decision whether to enter into a short-term or spot market purchase of gas supplies must consider price and reliability. For instance, it is important to have a reliable, firm supply of gas guaranteed to be delivered during the peak season. However, during the offpeak season, if the Company can secure a more favorable price, spot market purchases may be acceptable as long as the supply will be delivered. It should be noted that most gas supply contracts are priced in a similar manner, that is based on index, thus, whether the contract is short-term or a spot purchase the price may be comparable. Therefore, reliability is an added consideration to the decision making process.
- (3) See response to 2.

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- (4) The Company monitors the market by relying on journals, price quote services such as NYMEX websites, Gas Daily or Inside FERC publications, alliance members, and being in touch with the market through conferences, meetings, and discussions with other LDCs.
- (5) The tools and mechanisms the Company has utilized in the past five years to monitor the market have been successful as the Company's cost of gas adjustment is competitive with market prices.

## THE BERKSHIRE GAS COMPANY **DTE 02-17**

Witness: Karen Zink **Date Filed:** August 9, 2002

#### **Question:**

**D.T.E. 1-128** Please describe the processes by which the Company analyzes its supply and capacity requirements and makes decisions concerning the portions of supply necessary to meet elements of anticipated demand. In your response, please describe the process by which the Company identifies the options and strategies that are available to it when designing its portfolio. Please indicate the officers and individuals responsible at each stage of this process.

#### **Response:**

As described in the Company's initial filing, the Company's forecast of firm sendout is the basis for designing its portfolio of resources. The resource requirements are determined and analyzed for normal year, design year, cold snap and design day weather conditions. The Company will then run its Gas Supply Dispatch Optimization Model (Supplementary Materials, Vol. 3) to evaluate and compare, the mix of the portfolio required to meet the daily projected sendouts on a least-cost scenario. The types of resources needed will generally be determined by the shape of the customers' load distribution on the Company's system. Resources are selected to further Berkshire's portfolio objectives, namely to continue to provide reliable, least cost service with a minimum impact upon the environment under normal and design conditions.

Like most gas distribution companies in Massachusetts, Berkshire's resources need to meet the typical loads experienced on its system, i.e. base, seasonal and peaking. Berkshire's weather patterns are the coldest and most severe in the state. Berkshire's location also reduces the opportunities available to the Company. The resources to meet these various scenarios are firm third party supply from South Texas and Louisiana and Canadian Supply from Niagara Falls, New York and firm transportation on Tennessee Gas Pipeline Company's system from those areas to Berkshire's meter stations for base load. Recently, supply options are available from Nova Scotia. Seasonal loads are served with storage gas located in New York, Pennsylvania and West Virginia and with additional firm transportation on Tennessee Gas Pipeline from those locations to Berkshire's meter stations along with base load supplies. Peaking loads are served with a combination of both LNG backhaul delivery on Tennessee as well as LNG liquid vaporized at Berkshire's temporary facility located in its Greenfield service territory (for maintaining system operating pressures). In addition, the Company also utilizes its peaking resources located within its service territory. They include a peaking contract with a cogenerator, local propane

## THE BERKSHIRE GAS COMPANY DTE 02-17

production at its five peak shaving facilities and its Load Management Rate utilized in its Greenfield division to complete its peak day resources required to meet Company sendout. The Company's ongoing DSM programs have also provided and continue to provide resources for the Company for weather sensitive customers.

The Company continually monitors and evaluates its resource plan. To this end, the Company monitors daily gas index prices in order to change supply mix when cost savings will result. On a daily, weekly and monthly basis, the Company evaluates its resource requirements and releases those assets not required to serve its market and returns any values received for those assets to its firm customers. Longer term resource requirements are addressed at least twice per year. The first analysis is performed during the yearly fiscal budgeting process while the second, and more substantial, resource requirement analysis is performed for the Company's internal five-year long-range plan. This process highlights the need for, and timing of, resource requirement adjustments. Given the cyclical nature of supply availability, the Company's goal is to develop a long-term supply plan which achieves a proper balance of the overall goals of flexibility and reliability for its customers. The pursuit of a "Least Cost Supply Strategy" allows Berkshire Gas to provide for the public health, safety, and welfare with reasonably priced gas supply at all times.

The Company's overall resource plan must also reflect the requirements of diversification of supply resources, maintenance and operation of a sound distribution system, as well as to provide for future demonstrated customer demand. The resource plan must be flexible to facilitate the Company's response to changing market and regulatory conditions. The Company's supply plan and resources are also continually being evaluated for such additional factors as existing contractual changes and projected regulatory requirements, especially in light of the collaborative effort currently in progress developing recommendations for deregulating the gas industry in the state of Massachusetts and having full competition of commodity sales of gas to customers. The decisions by the Department for unbundling is expected to substantially change the requirements and, in turn, the planning process for the Company.

The officers and individuals involved directly or indirectly in the planning stages include the individuals listed on the response to DTE 1-58 as well as the President of Berkshire Gas and the Senior Vice President of Transmission and Supply of Energy East Management Corporation.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

D.T.E. 1-136 Please discuss the Company's current expectations about the gas supply market and

whether it expects new contracts to offer superior/inferior terms and conditions compared

with previous offerings.

**Response:** The Company has had direct experience with market conditions and offerings for new

contracts in the last year. The responses to the Company's RFP for replacement gas supply resources reflects lower demand charges than were in effect in 1992 when the Company entered into its last gas supply contracts. Further, there are additional sources of supply and capacity available today that were not available in 1992. However, the gas supply market is in a volatile time period which may place more restrictions on certain terms and conditions of contracts, such as stricter take or pay provisions. Thus, the Company believes certain provisions of new offerings may be superior to current contracts while other

provisions may be inferior to current contracts.

# THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

**Question:** 

**D.T.E. 1-137** Please identify the steps in the Company's resource acquisition process. Please detail the

process involved when the Company solicits the marketplace for incremental and

replacement resources.

**Response:** See the response to information request DTE 1-128.

## THE BERKSHIRE GAS COMPANY DTE 02-17

Witness: Karen Zink
Date Filed: August 9, 2002

#### **Question:**

D.T.E. 1-138 Please submit a copy of the Company's standard (or most recent) RFP for pipeline

supplies of natural gas. Please refer to the RFP and discuss (1) how it meets the Company's supply strategy and (2) how it helps the Company meet its planning goals and

objectives.

**Response:** See attached RFP which was issued for the Company's replacement of its existing gas

supply contracts. Page 2 of the RFP discusses the objectives of firm supply service which meet the Company's supply strategy. Page 6 through 9 outline the minimum service

requirements which will help the Company meet its planning goals and objectives.

## THE BERKSHIRE GAS COMPANY **DTE 02-17**

Witness:
<b>Date Filed:</b>

## **Question:**

**D.T.E. 1-144** Please refer to page 42 of the Company's filing where the Company states, "Still further analysis will be performed when mandated by particular circumstances." Please explain what form of analysis would be performed and what type of "circumstances" can be expected?

**Response:** 

The nature of the analysis depends upon the particular circumstances and the relevant concern. For example, in the face of higher gas costs in 2000/2001 extensive additional efforts were applied seeking any available opportunity to secure savings. In the fall of 2001, the Company completed a variety of efforts to address delivery concerns with LNG.

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